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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/551,346	09/28/2005	Kazuhiro Nakamura	019519-484	4588
21839 7590 10/10/2007 BUCHANAN, INGERSOLL & ROONEY PC POST OFFICE BOX 1404 ALEXANDRIA, VA 22313-1404			EXAMINER CALLAWAY, JADE R	
			ART UNIT 2872	PAPER NUMBER
			NOTIFICATION DATE 10/10/2007	DELIVERY MODE ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary

Application No.

10/551,346

Applicant(s)

NAKAMURA, KAZUHIRO

Examiner

Jade Callaway

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 9/28/05, 8/30/06.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-17 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 28 September 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>9/28/05</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Priority

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Information Disclosure Statement

2. The information disclosure statement filed 9/28/05 fails to comply with 37 CFR 1.98(a)(2), which requires a legible copy of each cited foreign patent document; each non-patent literature publication or that portion which caused it to be listed; and all other information or that portion which caused it to be listed. It has been placed in the application file, but the information referred to therein has not been considered.

Drawings

3. The drawings were received on 9/28/05. These drawings are acceptable.

Specification

4. The specification is objected to because of the following informalities: the cross-reference to a related application is not in the preferred order.

Appropriate correction is required.

5. The following guidelines illustrate the preferred layout for the specification of a utility application. These guidelines are suggested for the applicant's use.

Arrangement of the Specification

As provided in 37 CFR 1.77(b), the specification of a utility application should include the following sections in order. Each of the lettered items should appear in upper case, without underlining or bold type, as a section heading. If no text follows the section heading, the phrase "Not Applicable" should follow the section heading:

- (a) TITLE OF THE INVENTION.
- (b) CROSS-REFERENCE TO RELATED APPLICATIONS.

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- (c) STATEMENT REGARDING FEDERALLY SPONSORED RESEARCH OR DEVELOPMENT.
- (d) THE NAMES OF THE PARTIES TO A JOINT RESEARCH AGREEMENT.
- (e) INCORPORATION-BY-REFERENCE OF MATERIAL SUBMITTED ON A COMPACT DISC.
- (f) BACKGROUND OF THE INVENTION.
 - (1) Field of the Invention.
 - (2) Description of Related Art including information disclosed under 37 CFR 1.97 and 1.98.
- (g) BRIEF SUMMARY OF THE INVENTION.
- (h) BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWING(S).
- (i) DETAILED DESCRIPTION OF THE INVENTION.
- (j) CLAIM OR CLAIMS (commencing on a separate sheet).
- (k) ABSTRACT OF THE DISCLOSURE (commencing on a separate sheet).
- (l) SEQUENCE LISTING (See MPEP § 2424 and 37 CFR 1.821-1.825. A "Sequence Listing" is required on paper if the application discloses a nucleotide or amino acid sequence as defined in 37 CFR 1.821(a) and if the required "Sequence Listing" is not submitted as an electronic document on compact disc).

6. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

7. The abstract of the disclosure is objected to because of the legal phraseology used. Correction is required. See MPEP § 608.01(b).

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claims 1-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nakamura et al. (6,791,649) in view of Nakamura (JP 2002-116323) (of record).

Consider claim 1, Nakamura et al. disclose (e.g. figures 1a-c, 6 a-d, 16) a method for manufacturing a polarizing plate comprising: bonding (via adhesive layer A) an antireflection film containing a transparent support (3) and an antireflection structure including a plurality of layers (1, 2) different in refractive index each comprising a cured film to a polarizing film (251, polarizing layer), wherein at least one layer of the plurality of layers different in refractive index is a layer having a higher refractive index than that of the transparent support and a thickness of 10nm to 2 μ m [col. 6, lines 34-41, col. 7, lines 12-17, 48-53, col. 8, lines 59-67, col. 10, lines 51-59, col. 18, lines 39-41, col. 54, lines 11-35]. However Nakamura et al. do not disclose an antireflection film that is bonded to the polarizing film after being subjected to a hydrophilization treatment so that a contact angle to water of a surface of the antireflection film to be bonded to the polarizing film falls within a range of 20 degrees to 50 degrees. Nakamura et al. and Nakamura are related as polarizing plates and films. Nakamura teaches an antireflection film (deviation film) that is bonded to the polarizing film after being subjected to a hydrophilization treatment so that a contact angle to water of a surface of

the antireflection film to be bonded to the polarizing film falls within a range of 20 degrees to 50 degrees [0016]. It would have been obvious to a person of ordinary skill in the art at the time the invention was made to have the antireflection film of Nakamura et al. be bonded to the polarizing film after being subjected to a hydrophilization treatment as taught by Nakamura so that dust is not able to adhere in the interfaces between the surfaces of the antireflection film and the polarizing film.

Consider claim 2, Nakamura et al. disclose a method as set forth above. However, Nakamura et al. do not disclose that the hydrophilization treatment includes a step of dipping the antireflection film in an alkali solution for saponification. Nakamura teaches a hydrophilization treatment that includes a step of dipping the antireflection film in an alkali solution for saponification [0016]. It would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify the hydrophilization treatment of Nakamura et al. to include the step of dipping an antireflection film in an alkali solution as taught by Nakamura to neutralize the polarizing plates.

Consider claim 3, Nakamura et al. disclose (e.g. figures 1 a-c, 6 a-d and 16) a method for manufacturing a polarizing plate comprising: bonding (via adhesive layer A) an antireflection film containing a transparent support (3) and an antireflection structure including a plurality of layers (1,2) different in refractive index each comprising a cured film to a polarizing film (251, polarizing layer) [col. lines 34-41, col. 7, lines 12-17, 48-53, col. 8, lines 59-67, col. 10, lines 51-59, col. 18, lines 39-41, col. 54, lines 11-35].

However Nakamura et al. do not disclose a surface of the antireflection film opposite to

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a surface thereof on which the antireflection structure is formed is taken as a bonding surface to the polarizing film, and only the bonding surface is subjected to a saponification treatment so that a contact angle to water falls within a range of 10 degrees to 50 degrees. Nakamura teaches a surface of the antireflection film opposite to a surface thereof on which the antireflection structure is formed is taken as a bonding surface to the polarizing film, and only the bonding surface is subjected to a saponification treatment so that a contact angle to water falls within a range of 10 degrees to 50 degrees [0016]. It would have been obvious to a person of ordinary skill in the art at the time the invention was made to have the antireflection film bonding surface of Nakamura et al. be subjected to a saponification treatment as taught by Nakamura so that dust is not able to adhere in the interfaces between the surfaces of the antireflection film and the polarizing film.

As set forth above, the modified Nakamura et al. reference discloses all of the elements of the claims from which the following claims depend, and the elements are hereby incorporated into the following according to dependency.

Consider claims 4-5, Nakamura et al. disclose a cured film is obtained by coating, drying and curing (by crosslinking) a coating composition containing at least one film-formable solute (inorganic fine particles) and at least one solvent (methanol, ethanol) [col. 18, lines 1-67, col. 19, lines 1-27].

Consider claims 6-7, Nakamura et al. disclose a method wherein at least one of the plurality of layers different in refractive index contains inorganic particles [col. 18, lines 59-67, col. 19, lines 1-3, col. 24, lines 11-16].

Consider claims 8-9, Nakamura et al. disclose a method wherein the plurality of layers different in refractive index include at least one high refractive index layer having a higher refractive index than that of the support and at least one low refractive index layer having a lower refractive index than that of the support, and the high refractive index layer has a refractive index of 1.55 to 2.4 and contains inorganic particles containing titanium dioxide and at least one element selected from cobalt, aluminum, and zirconium [col. 18, lines 20-31, 60-67, col. 19, lines 1-3, col. 24, lines 11-57].

Consider claims 10-11, Nakamura et al. disclose a method wherein each of the inorganic particles is covered with at least one compound of an inorganic compound, an organometallic compound, and an organic compound, which reduces or destroys a photocatalytic activity [col. 2, lines 41-54].

Consider claims 12-13, Nakamura et al. disclose a polarizing plate that is manufactured by the given manufacturing method [col. 1, lines 9-12].

Consider claims 14-15, Nakamura et al. disclose (e.g. figures 13-16) a polarizing plate wherein the polarizing plate comprises a plurality of surface protective films including the antireflection film (253); a film other than the antireflection film included in the plurality of surface protective films is an optical compensation film (252) which contains an optical compensation layer containing an optical anisotropic layer (223) provided at a side of the optical compensation film, the side being opposite to a side thereof to be bonded to the polarizing film (251, polarizing layer); the optical anisotropic layer is a layer having a negative birefringence (col. 42, lines 17-20), and containing a compound having a discotic structure unit (224 a-c, discotic compounds), a disc plane

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of the discotic structure unit is inclined to a plane of the surface protective film, and an angle formed between the disc plane of the discotic structure unit and the plane of the surface protective film varies in a direction of depth of the optical anisotropic layer [col. 39, lines 50-60, col. 47, lines 18-65, col. 48, lines 1-21, col. 54, lines 11-35].

Consider claims 16-17, Nakamura et al. disclose a liquid crystal display device containing a polarizing plate [col. 1, lines 29-34 and col. 28, lines 35-40].

Conclusion

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Ikeyama (7,212,341) discloses an antireflection film and image display device. Kawanishi et al. (2003/0194668) disclose a process for alkali saponification of a polymer film. Saiki et al. (6,900,937) disclose an optical element, polarizing plate and method for manufacturing thereof.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jade Callaway whose telephone number is 571-272-8199. The examiner can normally be reached on Monday to Friday 7:00 am -4:30 pm est.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephone B. Allen can be reached on 571-272-2434. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

JRC



Stephone B. Allen
Supervisory Patent Examiner